PAGE 217 * RCVD AT 4/24/2006 10:56:38 AM [Eastern Daylight Time] * SVR:USPTO-EFXRF-210 * DNIS:2738300 * CSID:5183877751 * DURATION (mm-ss):02-00

Reply to Office communication of April 19, 2006

RECEIVED
CENTRAL FAX CENTER

APR 2 4 2006

LISTING OF THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1. (Currently amended) A thermal interface composition, comprising: a blend of a polymer matrix, at least one micron-sized filler, and electrically conductive nanoparticles, wherein the thermal interface composition is electrically non-conducting.

Claim 2. (Original) A thermal interface composition as in claim 1, wherein the polymer matrix comprises a curable polymeric composition.

Claim 3. (Original) A thermal interface composition as in claim 2, wherein the curable polymeric composition is selected from the group consisting of epoxy resins, acrylate resins, organopolysiloxane resins, polyimide resins, polyimide resins, fluorocarbon resins, benzocyclobutene resins, and fluorinated polyallyl ethers, polyamide resins, polyimidoamide resins, cyanate ester resins, phenol resol resins, aromatic polyester resins, polyphenylene ether (PPE) resins, bismaleimide triazine resins, and fluororesins.

Claim 4. (Original) A thermal interface composition as in claim 1 wherein the micron-sized filler is selected from the group consisting of fumed silica, fused silica, finely divided quartz powder, amorphous silicas, carbon black, graphite, diamond, aluminum hydrates, metal nitrides, metal oxides, and combinations thereof.

PAGE 317 * RCVD AT 4/24/2005 10:56:38 AM [Eastern Daylight Time] * SVR:USPTO-EFXRF-2/0 * DNIS:2738300 * CSID:5183877751 * DURATION (mm-ss):02-00

Reply to Office communication of April 19, 2006

Claim 5. (Currently amended) A thermal interface composition as in claim 1 wherein the micron-sized filler emprises between is present in an amount in a range of from about 10 weight % and to about 95 weight % of the total composition.

Claim 6. (Currently amended) A thermal interface composition as in claim 1 wherein the micron-sized filler comprises particles of a size in a range of ranging from about 1 micron to about 100 microns.

Claim 7. (Original) A thermal interface composition as in claim 1, wherein the electrically conductive nanoparticles are selected from the group consisting of copper, silver, platinum, palladium, gold, graphite, aluminum, doped silicon and silicon carbide.

Claim 8. (Currently amended) A thermal interface composition as in claim 1 wherein the electrically conductive nanoparticles comprise between are present in an amount in a range of from about 3 weight % and to about 50 weight % of the total composition.

Claim 9. (Currently amended) A thermal interface composition as in claim 1 wherein the electrically conductive nanoparticles comprise between are present in an amount in a range of from about 1% and to about 25 % by volume of the total composition.

Claim 10. (Currently amended) A thermal interface composition as in claim 1, wherein the electrically conductive nanoparticles are of a size in a range of ranging from about 1 nanometer to about 250 nanometers.

Claim 11. (Original) A thermal interface composition as in claim 1, further comprising organo-functionalized nanoparticles.

Claim 12. (Currently amended) A thermal interface composition as in claim 11, wherein the organo-functionalized nanoparticles comprise an organoalkoxysilane, vinyl, allyl, styrenic, silvl or siloxyl of the formula (R¹)_aSi(OR²)_{4-a} wherein R¹ is independently

PAGE 417 * RCVD AT 4/24/2006 10:56:38 AM [Eastern Daylight Time] * SVR:USPTO-EFXRF-210 * DNIS:2738300 * CSID:5183877751 * DURATION (mm-ss):02-00

Reply to Office communication of April 19, 2006

at each occurrence a C₁₋₁₈ monovalent hydrocarbon radical—optionally further functionalized with alkyl acrylate, alkyl methacrylate, opoxide, vinyl, allyl, styrenie, silyl or siloxyl groups or C ₆₋₁₄ aryl-radical; R² is independently at each occurrence a C ₁₋₁₈ monovalent hydrocarbon radical or a hydrogen radical; and "a" is a whole number equal to in a range of from 1 to 3 inclusive.

Claim 13. (Currently amended) A thermal interface composition as in claim 1 having a thickness in a range of ranging from about 10 to about 150 microns.

Claims 14. - 51 (Cancelled)

Claim 52. (New) A cured layer formed from the thermal interface composition as defined in claim 2.

Claim 53. (New) An electronic component comprising the cured layer as defined in claim 52, wherein the cured layer is an underfill layer that secures a heat producing component to a printed circuit board.

Claim 54. (New) An electronic component as defined in claim 53, wherein the underfill layer is electrically non-conducting.

Claim 55. (New) An electronic component as defined in claim 52, wherein the cured layer is selected from the group consisting of epoxy resins, acrylate resins, organopolysiloxane resins, polyimide resins, polyimide resins, fluorocarbon resins, benzocyclobutene resins, and fluorinated polyallyl ethers, polyamide resins, polyimidoamide resins, cyanate ester resins, phenol resol resins, aromatic polyester resins, polyphenylene ether (PPE) resins, bismaleimide triazine resins, and fluororesins.

Claim 56. (New) An electronic component as defined in claim 52, wherein the wherein the micron-sized filler comprises one or more of aluminum hydrates, metal nitrides, or metal oxides.

BACE 517. RCVD AT 4/24/2006 10:56:38 AM [Eastern Daylight Time]. SVR:USPTO-EFXRF-2/0. DNIS:2738300. CSID:518387751. DURATION (mm-ss):02-00

Reply to Office communication of April 19, 2006

Claim 57. (New) An electronic component as defined in claim 52, wherein the micron-sized filler is present in an amount in a range of from about 10 weight percent to about 95 weight percent of the total composition.

Claim 58. (New) An electronic component as defined in claim 52, wherein the micron-sized filler comprises particles having a size in a range of from about 1 micron to about 100 microns.

Claim 59. (New) An electronic component as defined in claim 52, wherein the electrically conductive nanoparticles are comprise one or more of copper, silver, platinum, palladium, gold, graphite, aluminum, or silicon.

Claim 60. (New) An electronic component as defined in claim 52, wherein the electrically conductive nanoparticles are present in an amount in a range of from about 3 weight percent to about 50 weight percent of the total composition.

Claim 61. (New) An electronic component as defined in claim 52, wherein the electrically conductive nanoparticles are present in an amount in a range of from about 1 percent to about 25 percent by volume of the total composition.

Claim 62. (New) An electronic component as defined in claim 52, wherein the electrically conductive nanoparticles have a size in a range of from about 1 nanometer to about 250 nanometers.

Claim 63. (New) An electronic component as defined in claim 52, further comprising organo-functionalized nanoparticles.

Claim 64. (New) An electronic component as defined in claim 63, wherein the organo-functionalized nanoparticles comprise an organoalkoxysilane, vinyl, allyl, styrenic, silyl or siloxyl of the formula $(R^1)_a Si(OR^2)_{4a}$ wherein R^1 is independently at each occurrence a C_{1-18} monovalent hydrocarbon radical and R^2 is independently at each

DAGE 617 * RCVD AT 4/24/2006 10:56:38 AM [Eastern Daylight Time] * SVR:USPTO EFXRF-20 * DNIS:2738300 * CSID:518837751 * DURATION (mm-ss):02-09 PAGE 617 * COLD 1:100 PAGE 10:100 PAGE 10:1

Reply to Office communication of April 19, 2006

occurrence a C $_{1-18}$ monovalent hydrocarbon radical or a hydrogen radical; and "a" is a whole number in a range of from 1 to 3 inclusive.

Claim 65. (New) An electronic component as defined in claim 52, wherein the cured layer has a thickness in a range of from about 10 microns to about 150 microns.